Treat-to-target: optimising outcomes for hidradenitis suppurativa

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Data Availability

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Main manuscript

Treat-to-target (T2T) is a well-established concept in chronic inflammatory disease management but has yet to be applied to hidradenitis suppurativa (HS). The concept is important in HS because, as well as managing current symptoms, tight disease control may prevent disease progression in the context of a scarring condition.

What is T2T? The term is defined by Google AI as "Setting specific treatment goals, such as achieving remission or minimal disease activity, and regularly monitoring progress towards these goals via collaboration between the patient and their clinician." Why is T2T needed in HS? One issue is that several HS guidelines, including the current 2018 British Association of Dermatologists guidelines,[1] place targeted therapies at the end of the treatment pathway, tending to delay initiation of more effective therapies.

What should be the therapeutic target in HS? Currently, the commonest primary endpoint in phase 3 HS trials is HiSCR, defined as at least a 50% reduction in abscesses and inflammatory nodules from baseline, with no increase in the number of abscesses or draining tunnels. However, most patients and clinicians understandably view HiSCR as insufficient. In routine practice, minimal disease activity is probably a better goal. The term has yet to be defined for HS, however it will likely describe disease activity in terms of the inflammatory burden and associated symptoms and impact on quality of life. Improving these aspects of HS is achievable with targeted therapies such as biologics designed to reduce HS inflammation. Remission is a concept achievable by early targeted therapy in the window of opportunity[2] that prevents scarring. However, in most cases of moderate-to-severe HS, tunnels and other scarring already exists and so achieving remission is likely to require both medical therapy and surgical therapy to control the inflammatory burden and remove permanent scarring respectively.

How should the targets be measured in a T2T approach? A combination of clinically reported and patient reported outcomes provides balance and encourages the required collaboration between patients and their clinicians. Feasibility is an important element for routine clinical practice. The Hidradenitis Suppurativa Core Outcome Set Collaboration (HiSTORIC) recently published a consensus statement on instruments for routine practice.[3] The consensus was to measure an investigator global assessment, the HS-IGA,[4] and HS-specific quality of life, via the HiSQOL instrument.[5] Reflecting rapid evolution of HS outcomes assessment, there are two new instruments under development that may play a role. Firstly, the Investigator Global Assessment of Hidradenitis Suppurativa (I-GLASS) instrument designed to measure inflammatory load with less need to count individual lesions.[6] Secondly, a shortened version of HiSQOL, HiSQOL-Mini will be available soon.[7] Both are designed to allow swifter assessment of HS in routine practice and registry settings.

How often should the targets be measured? Figure 1 provides an algorithm in which targeted therapy is considered at the first appointment, if antibiotics have been tried already, with review at 3-4 months in line with primary endpoints of phase 3 HS trials. The interval between reviews is influenced by disease activity, with those with unstable disease reviewed every 3-4 months until

sufficient disease control is achieved, while those with stable disease could be reviewed annually. Ideally patients could be offered a home 'flare pack' containing items such as cooling packs, analgesia, and a short course of broad spectrum antibiotic. If insufficient, direct contact with the HS service provider would allow their long term therapy to be adjusted in a timely manner. By reviewing those with stable disease infrequently, clinic time would be freed up to prioritise those with unstable disease.

What is effective treatment in the T2T approach? Essentially moving away from unlicensed traditional oral therapies such as antibiotics to proactive use of licensed targeted therapies such as biologics.[8] The licence for targeted HS therapies is for moderate to severe disease. Based on the IHS4 scoring system this allows treatment initiation as soon as a single draining tunnel occurs because the score of four for a draining tunnel reaches the threshold for moderate disease. The T2T approach could be extended to prevention of disease, for example laser hair treatment provided to HS patients for skin regions that have not yet developed scarring.

The T2T approach is well established for scarring chronic inflammatory conditions such as rheumatoid arthritis and Crohn disease and may offer similar benefits for HS, focusing resources on better symptom control and prevention of disease progression. In addition, by encouraging HS patients to monitor their own disease severity using patient reported outcomes, T2T encourages a therapeutic partnership between patients and their clinician and promotes shared decision making.

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Figure 1. Treat-to-target schematic outlining the management pathway for hidradenitis suppurativa

Legend:

IHS4, International hidradenitis Suppurativa Severity Score System; I-GLASS, Investigator Global Assessment of Hidradenitis Suppurativa; HiSQOL (Mini), Hidradenitis Suppurativa Quality of Life (Mini) instrument.